

**B.S. 5837 Arboricultural
Method Statement
at
Land adjacent to Green End
17 Dene Road
Northwood
HA6 2BS
Rev C**

**Client: AJA Taylor and Co Ltd
1a Eastbury Road
Northwood
Middx
HA6 3BG**

Important note for demolition and construction contractors

This document includes requirements for arboricultural supervision by a suitably qualified arboricultural consultant in certain areas and techniques that may involve a specialised input. Adherence to these requirements is necessary for this document to comply with the Town and Country Planning Act 1990

Prepared by
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Date
21/02/2024



1.0 Brief:

- 1.1 I am instructed by AJA Taylor and Co Ltd to prepare an Arboricultural Method Statement (AMS) in respect of a proposed development of the site at Land adjacent to Green End, 17 Dene Road, Northwood including a residential development of the site including parking and landscaping.
- 1.2 The method statement is based on the best available information at this stage of the planning process and may need to be updated in the context of a specific planning condition when the detail is known.
- 1.3 The purpose of the method statement is to explain how and when the protection measures should be installed, and how they are to be maintained for the duration of the development activity.

2.0 Arboricultural Supervision

- 2.1 An arboricultural consultant will be appointed by the developer prior to the commencement of any works on the site.
- 2.2 Prior to the commencement of works a set up meeting between the main contractor, any (relevant) sub-contractors, a representative from the LPA and the arboricultural consultant will take place. In the event the representative from the LPA is unable to attend, the arboricultural consultant will make a note of discussions and will advise the LPA in writing.
- 2.3 The meeting will establish a line of communication between the working parties and to understand the parameters of the site, underlining the importance of maintaining and respecting tree protection barriers.
- 2.4 At the meeting the Arboricultural Method Statement (AMS) is to be signed off by the person responsible for the day to day running of the site (normally the site foreman).
- 2.5 By signing off the AMS, the responsible person agrees that he/she has read and understood the method statement and agrees to adhere to it.
- 2.6 In the event of the responsible person being replaced at any time during the development it will be their responsibility to ensure the new person responsible for the site is made aware of the method statement and the need to adhere to the method statement.
- 2.7 A copy of this report will be permanently available on site for the duration of the development activity. It can also be copied for the purposes of tendering, planning the timing of operations and used as a reference as a general guide on how to protect important trees.
- 2.8 A full scale (1:200) copy of the tree protection plan (appendix 1) is to be available at all times on site including a scale bar.

- 2.9 No tree work is to take place without obtaining, in writing, the express consent of the Local Authority.
- 2.10 Once the site becomes active the Local Authority will be able to visit and monitor the site and to take enforcement against any breaches of the planning permission including the failure to adhere to this method statement.
- 2.11 If required, the arboricultural consultant will visit to record specific stages of the development (e.g. any specialised or sensitive stages of the construction process) and to be on hand to advise as necessary.
- 2.12 All site visits are to be recorded on paper and with accompanying photographs. The purpose of recording the visits is to
- (a) Provide the developer with proof of compliance in the event of any dispute
 - (b) Allow the LPA to discharge the relevant planning conditions

Table :1 Schedule of works and supervision

Sequence	Activity	Supervision
1	Pre commencement meeting	LPA tree officer, site manager, project arboriculturist
2	Installation of fencing and ground protection in accordance with TPP	Site manager and project arboriculturist
3	Excavation of foundations	Site manager
4	Main development phase	Site manager
5	Removal of tree protection following completion	Site manager
6	Landscaping and assessment of post development tree condition	Project arboriculturist

3.0 The development

3.1 Overview

3.1.1 The expected programme of site development where arboricultural input is required is as follows:

1. Pre commencement meeting
2. Tree removal and pruning
3. Installation of protective fencing
4. Excavation of foundations
5. Erection of main build

6. Removal of tree protection measures
7. Final landscaping

3.2 Proposed tree works

3.2.1 The arboricultural impact assessment has identified trees that are to be removed in order to facilitate the development. These are:-

Tree number	Species	Category
T64 – 67	Apple	Category C
T71 – 73	Apple	
T76 & 77	Apple	
T78	Plum	
T84	Horse chestnut	
T85	Yew	
T93	Myrobalan plum	
T95 – 97	Silver birch*	
T100 – 104	Apple	
T117 – 119	Holly	
T126	Willow	
G1 (in part)	Lawson cypress	

3.2.2 In addition, the following pruning work will be carried out

Tree number	Species	Work schedule
T99	Yew	Prune back lateral branches on the east side, reducing by 3m in length Prune back lateral branches on the south side, reducing by 1m in length

3.2.3 All tree works are to be carried out in line with the recommendations of B.S. 3998: 2010 Tree work – Recommendations.

3.3 Erection of fencing

3.3.1 The tree protection plan (appendix 1) shows the line and position of the root protection fencing to be erected prior to any other works taking place on site.

3.3.2 The root protection fencing installation shall be approached from within the central working zone to avoid damage within the root protection area itself, in accordance with the recommendations of BS 5837/2012, illustrated by Fig. 1.

3.3.3 The fencing for the root protection zones shall be constructed of scaffold tube uprights (set at 3m intervals with diagonal braces driven securely into the ground). Thereafter 'Heras' type fencing shall be attached to the scaffold framework using either steel strapping or scaffold clamps. The fencing shall comply with the requirements of the British Standard B.S. 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

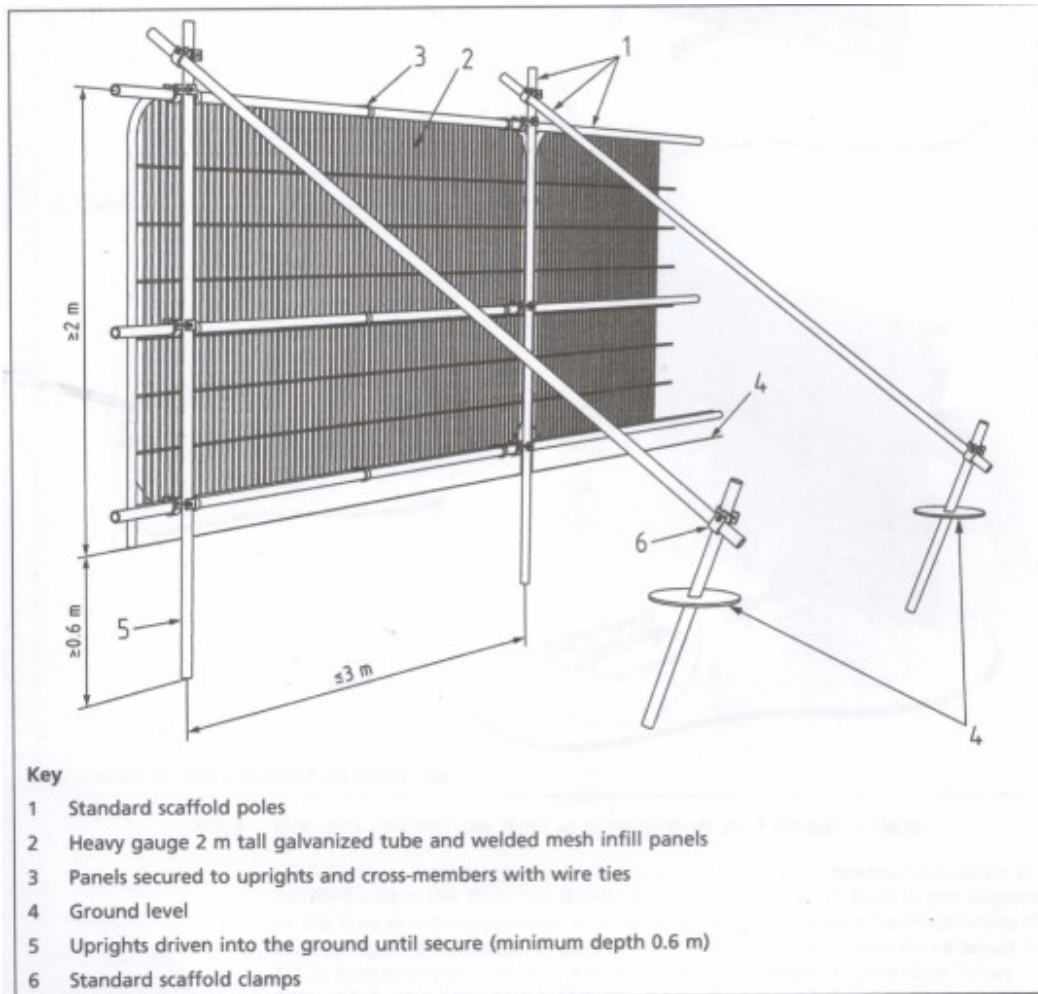


Fig. 1 Protective fencing in accordance with B.S. 5837

3.3.4 The fenced off areas are to be regarded as a Construction Exclusion Zone (CEZ). This area is to be considered sacrosanct and strictly off limits to any construction activity including any movement of machinery, storage of materials or parking of contractors' vehicles.



Fig 2. Signage attached to fencing reinforces the protection afforded by these barriers

- 3.3.5 The fencing protecting the RPA is not to be moved under any circumstances unless this has been specifically detailed in the AMS or agreed on site with the arboricultural consultant present.
- 3.3.6 Ignoring the fencing barriers may constitute a breach of the planning permission and may also be regarded as in contravention of any formal tree protection that applies (Tree Preservation Orders/ Conservation Areas).
- 3.3.7 There is to be no burning of any materials or substances within 10m of the root protection barriers.
- 3.3.8 There is to be no storage of cement bags, chemicals or any other toxic or potentially toxic substances within the CEZ.
- 3.3.9 Once the fencing has been properly installed, the retained arboricultural consultant will visit the site to confirm the correct installation of the fencing.

3.4 Accessing the site

- 3.4.1 The development proposes two new entrances to the site one off Dene Road, the other shall be routed from the west off Foxdell.
- 3.4.2 In both these cases a combination of ground protection mats and a cellular confinement system (a 'no dig' construction approach) is to be used to avoid the compaction of soil and any other root damage.
- 3.4.3 The installation of the ground protection mats shall be undertaken before any other construction work takes place on the site. The ground protection mats shall remain in position throughout the construction period and shall only be removed once all construction work is complete and the site is being landscaped.
- 3.4.4 The ground protection mats shall be inspected regularly to confirm that they remain viable and correctly positioned. In the event of any damage to a mat being recorded, the mat shall be replaced with an undamaged mat.
- 3.4.5 If a mat becomes dislodged it shall be correctly realigned to ensure continuous protection without gaps between mats, and properly secured.
- 3.4.6 The ground protection mats shall only be removed in order to allow for the laying of the cellular confinement systems, whether this is across roadways or across pathways.

3.5 Installation of ground protection measures

- 3.5.1 The tree protection plan – (appendix 1) shows the position of the ground protection measures do be put into place prior to any other works taking place on site.

- 3.5.2 The areas of the driveway illustrated will be covered by ground protection matting (such as Ground Guards – Maxi Trak Extra Heavy duty), suited to supporting the weight of construction traffic (recommended load bearing 50t – maximum 80t)
- 3.5.3 The separate mats are joined together using joiner kits to lock the panels together.



Fig. 3 Ground Guards – Maxi Trak Heavy duty is ideal for the ground protection required here.

- 3.5.4 Where indicated on the tree protection plan ground protection shall also be put in place to provide a surface for pedestrian traffic and for scaffolding to be positioned.
- 3.5.5 The ground protection for pedestrian access only shall consist of a geotextile membrane laid across the area, which is then covered by a layer of wood chips at least 150mm thick.
- 3.5.6 Scaffold boards shall then be placed onto the wood chips layer and firmly butted up close to one another. These are to be held in place with steel pins.
- 3.5.7 The level of wood chips is to be checked periodically and if necessary topped up.



Fig 4. Scaffold boards on top of wood chips serving as ground protection. Note the geotextile layer underneath

3.6 Foundations

- 3.6.1 The foundations for the houses will be excavated using standard methods (i.e. a digger with a bucket to produce a strip foundation). Where this method is to be used the digger is to deposit earth into dumper trucks which will take the excavated soil to the side of the site for disposal by lorry.
- 3.6.2 The spoil from the foundations will be loaded onto tipper lorries and taken away. No excess soil is to be deposited within the site parameters.

3.7 Mortar mixing

- 3.7.1 Concrete (when not delivered direct by concrete lorry) and mortar will be mixed to the front of the houses in a dedicated working area.
- 3.7.2 All mortar mixing and handling of any other hazardous materials shall take place outside the rpa's of trees. Water run-off from the cleaning of either a mortar tower or concrete mixers is to be directed away from rpa's and shall take place as far from trees as possible.
- 3.7.3 A confinement area controlling the run-off shall be installed, incorporating an impermeable layer of strong plastic sheeting help within a raised bed. Washing of cement mixers shall take place only within the confined area.

3.8 Storage of materials

- 3.8.1 Materials are to be delivered to the areas in front of the houses where they will

be unloaded using a fork-lift truck, which shall take the materials around the buildings for further distribution as necessary.

- 3.8.2 Materials will be re-distributed to the designated storage areas about the site using a fork-lift truck, by hand or other suitable means, such as a wheelbarrow.

3.9 Drains and services

- 3.9.1 The proposed drain and service runs have not been detailed at this stage although it is expected that for the most part services and drains will be routed beneath the proposed driveways and roads.

- 3.9.2 If necessary the routing of drains and services can be made the subject of a planning condition.

4.0 Post construction

4.1 Final removal of tree protection measures

- 4.1.1 Following the conclusion of all construction operations, site huts scaffolding, protective fencing and ground protection measures will be removed to allow for landscaping operations to take place.

- 4.1.2 Great care is needed at this stage from ground work contractors to continue to observe tree protection requirements. No machines are to be used within rpa's which specifically includes rotovators.

4.2 Installation of the cellular confinement system

- 4.2.1 The ground protection measures are to be removed only immediately prior to the laying of the cellular confinement products.

- 4.2.2 The materials for the cellular confinement areas shall be delivered adjacent to the working areas and stored there, ready for moving onto the specific working area. No machine or vehicle is to move onto the working area at any time prior to the laying of the cellular confinement system.

- 4.2.3 Prior to the laying of the cellular confinement system, the soil will be made level (by building up), removing any vegetation by hand and removing tree roots using a stump grinder if needed. Sharp sand shall be used to ramp up over any protruding roots.

- 4.2.4 Small voids will be filled with clean sharp sand (not builders sand).

- 4.2.5 A glyphosate based systemic herbicide will be carefully applied to any turf or other vegetation in advance of laying the cellular confinement system.

- 4.2.6 The use of heavy machinery to install the cellular confinement system shall be avoided to minimise the risk of causing soil compaction within the RPA. The

product shall be installed using a wheelbarrow and a shovel.

- 4.2.7 The stone aggregate used to backfill the cells shall be stored within the materials storage area, adjacent of the cellular confinement system.
- 4.2.8 A base geotextile layer made of polypropylene or polyester (min 300g/m²) with a CBR puncture resistance of 4000N shall be laid out covering the entire area to be surfaced. If more than one sheet is needed the sheets shall overlap by at least 30cm.
- 4.2.9 With the geotextile layer laid down, the panels of the cellular confinement system shall be stretched out to cover the area required. The panels shall be held in place using J-hooks (steel reinforcing bars bent into a 'candy-cane' shape) or similar (e.g. construction pins or wooden stakes).
- 4.2.10 Working from outside the no-dig area inwards, the backfill shall be added to create a surface on which workers can then step on in order to continue filling in the product. The backfill shall be made up of a free draining subbase material using crushed 20/40 stone that has been screened and washed. If 20/40 is not available, 4/20 stone can be used provided it has been washed or graded to contain no fine particles (fines).
- 4.2.11 The aggregate shall be overfilled by a minimum 25mm to help to protect the geocells. Where possible vehicle use shall be restricted to outside the RPA but where the use of tracked vehicles across the RPA is unavoidable, vehicles shall continue to work progressively beyond the RPA in order to avoid manoeuvring which could result in distortion of the cellular confinement product.
- 4.2.12 The settlement of the infill material shall be achieved by a minimum of four passes of a smooth roller (max. weight 1000kg/m width without vibration) or alternatively by several passes with a tracked excavator.
- 4.2.13 The cellular confinement system shall be held in place at the edges using a peg and board edging, using thick tanalised boards, spacing the pegs at 1m intervals to prevent bowing.
- 4.2.14 The upper layer shall then be completely covered by a geo-textile fabric with an overlap of at least 20mm at the edges to prevent any particles migrating from the upper surface into the cells. If more than one sheet is needed they shall overlap by at least 30cm. The geotextile layer shall be made of polypropylene or polyester (min 300g/m²) with a CBR puncture resistance of 4000N.
- 4.2.15 The finished surfaces of the cellular confinement systems shall be permeable to allow the continued passage of air and water to the soil below. If necessary fresh geotextile layer shall be laid down (replacing the old one) onto the aggregate of the panel to act as a separation layer to ensure there is no contamination of dust and dirt seeping through from the finished layer to the cells below.

4.2.16 The final surface layer of the roads, parking areas and pavements is yet to be determined, but will be constructed using a permeable material. For example washed gravel held in place by plastic stabilisation grids, such as a Core TRP Gravel Grid (Fig.5) could provide a suitable medium for some areas.

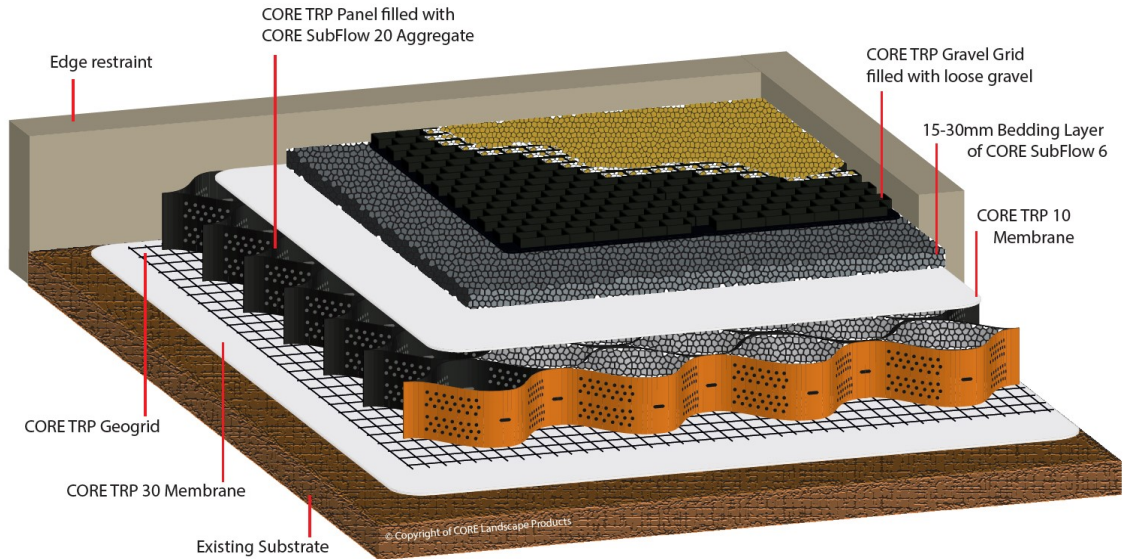


Fig. 5 The Core Drive product (cross section) using plastic grids and loose gravel as a final finish (image courtesy CORE LP).

4.2.17 Another acceptable finish would be brick pavers as illustrated by fig.6.

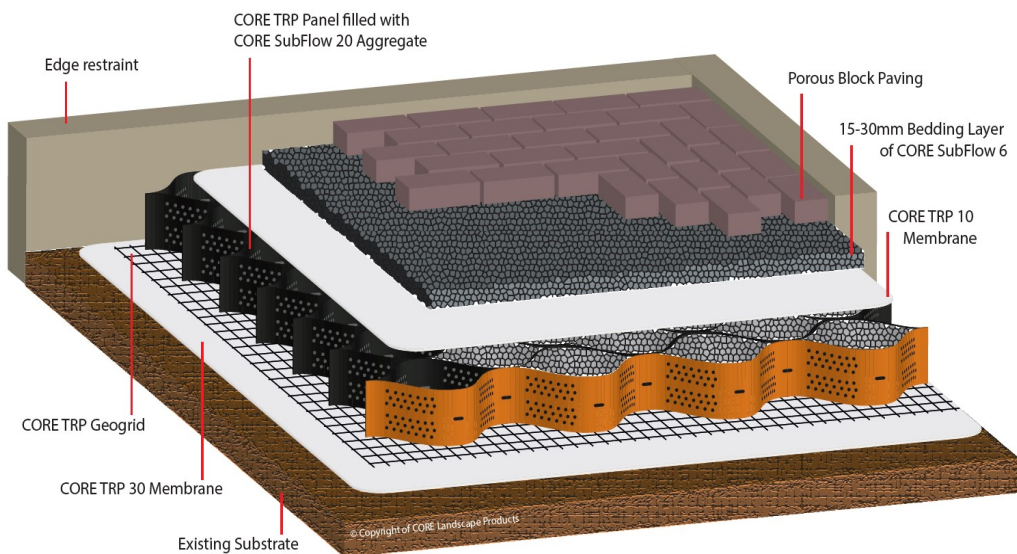


Fig. 6The Core Drive product (cross section) using block paving as a final finish (image courtesy CORE LP).

Signatures:

I confirm that I have attended a pre-application site meeting with the contractors and have gone through the requirements of the Arboricultural Method Statement and that a copy is available in the site office.

Arboricultural Consultant

I confirm that I have attended a pre-application site meeting with the arboricultural consultant and that I am responsible for the correct procedures being followed in accordance with the Arboricultural Method Statement and that a copy is available in the site office.

Site Manager/Foreman**Contact details:**

Simon Hawkins – Arboricultural Consultant 07784 915 944

Architects – David Parker Architects 01491 613066

London Borough of Hillingdon Council – Planning Department 01895 250 230

Appendix 1 Tree Protection Plan

